



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



AUG 26 2014

Wade Broughton  
General Mills Operations Inc.  
2000 W Turner Rd  
Lodi, CA 95242

**RE: Final – Authority to Construct/Certificate of Conformity (Minor Mod)**  
**Facility Number: N-355**  
**Project Number: N-140337**

Dear Mr. Broughton:

The Air Pollution Control Officer has issued the Authority to Construct permit to General Mills Operations Inc. for the modification of a turbine permit to clarify the ammonia monitoring requirements, at 2000 W Turner Rd in Lodi, CA.

Enclosed are the Authority to Construct permit and invoice for the engineering evaluation fees pursuant to District Rule 3010. The District's analysis of the proposal was sent to US EPA Region IX on July 21, 2014. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Rupl Gill at (209) 557-6400.

Sincerely,

  
Arnaud Marjollet  
Director of Permit Services

AM:JH

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

Due Date

10/20/2014

Amount Due

\$ 1,943.00

Amount Enclosed

ENGTIME N1140337  
355 N105529 8/19/2014

RETURN THIS TOP PORTION ONLY, WITH REMITTANCE TO:

GENERAL MILLS INC  
P O BOX 59145  
MINNEAPOLIS, MN 55459-0145

SJVAPCD  
4800 Enterprise Way  
Modesto, CA 95356-8718

*Thank You!*



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

SJVAPCD Tax ID: 77-0262563

GENERAL MILLS OPERATIONS, INC  
WADE BROUGHTON  
2000 W TURNER ROAD  
LODI, CA 95242

Facility ID

N355

Invoice Date

8/19/2014

Invoice Number

N105529

Invoice Type

Project: N1140337

PROJECT NUMBER: 1140337

ENGINEERING TIME FEES  
LESS PREVIOUSLY PAID PROJECT FEES APPLIED TO THIS INVOICE  
PROJECT FEES DUE (Enclosed is a detailed statement outlining the fees for each item.)

\$ 1,943.00

\$ 0.00

**\$ 1,943.00**

Late Payment (see Rule 3010, Section 11.0 Late Fees)

Postmarked

Total Due

After 10/20/2014 through 10/30/2014

\$ 2,137.30

After 10/30/2014

\$ 2,914.50

After 11/19/2014

Permits To Operate MAY BE SUSPENDED

San Joaquin Valley Air Pollution Control District  
4800 Enterprise Way, Modesto, CA 95356-8718, (209) 557-6400, Fax (209) 557-6475

**Invoice Detail**

Facility ID: N355

GENERAL MILLS OPERATIONS, INC  
WADE BROUGHTON  
2000 W TURNER ROAD  
LODI, CA 95242

Invoice Nbr: N105529  
Invoice Date: 8/19/2014  
Page: 1

**Engineering Time Fees**

Project Nbr	Quantity	Rate	Description	Fee
N1140337	19 hours	\$ 106.00 /h	Standard Engineering Time	\$ 2,014.00
			Less Credit For Application Filing Fees	(\$ 71.00)
			Standard Engineering Time SubTotal	\$ 1,943.00
<b>Total Engineering Time Fees:</b>				<b>\$ 1,943.00</b>



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** N-355-21-9

**ISSUANCE DATE:** 08/19/2014

**LEGAL OWNER OR OPERATOR:** GENERAL MILLS OPERATIONS, INC  
**MAILING ADDRESS:** P O BOX 59145

MINNEAPOLIS, MN 55459-0145

**LOCATION:** WADE BROUGHTON  
2000 W TURNER ROAD  
LODI, CA 95242

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 3.48 MW COGENERATION SYSTEM CONSISTING OF AN ALLISON MODEL 501 KB GAS TURBINE WITH A 16 MMBTU/HR DUCT BURNER SYSTEM ALL SERVED BY A SELECTIVE CATALYTIC REDUCTION SYSTEM, AND AN ELECTRIC MOTOR STARTER: MODIFICATION TO THE NOX MONITORING REQUIREMENTS TO REVISE THE AMMONIA INJECTION RATE REQUIREMENTS

## CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

6. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); District Rule 4801, County Rule 407 (San Joaquin)] Federally Enforceable Through Title V Permit
7. Water must be injected directly into the turbine's primary combustion zone at a water-to-fuel ratio of 0.8 to 1. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation of the turbine, and the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
9. Water injection system supply at the inlet to the turbine shall have an operational flow meter. The flow meter shall be equipped with a flow totalizer. [District Rule 2201] Federally Enforceable Through Title V Permit
10. This unit shall be fired exclusively on PUC-quality natural gas as defined in 40 CFR 60.331(u) which has a total sulfur content of less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b), District Rule 4201, County 407 (San Joaquin)] Federally Enforceable Through Title V Permit
11. Emissions from the gas turbine and duct burner system shall not exceed any of the following limits: 200 ppmvd CO @ 15% O<sub>2</sub>; 0.0066 lb-PM<sub>10</sub>/MMBtu; 0.0021 lb-VOC/MMBtu (referenced as methane); and 0.00285 lb-SO<sub>x</sub>/MMBtu (referenced as SO<sub>2</sub>). The CO emission limit is based on a 3-hour average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
12. Ammonia slip (NH<sub>3</sub>) emissions shall not exceed 10 ppmvd @ 15% O<sub>2</sub>. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown periods, emissions from the gas turbine and duct burner system shall not exceed 5 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub>, based on a 3-hour average. [District Rules 2201 and 4703, and 40 CFR 60.332(c)] Federally Enforceable Through Title V Permit
14. During startup and shutdown periods, emissions from the gas turbine and duct burner system shall not exceed 35 ppmvd NO<sub>x</sub> @ 15% O<sub>2</sub>. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. The duration of each startup and each shutdown shall not exceed 2 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
16. The total combined duration of startup and shutdowns shall not exceed 3 hours in any one day and shall not exceed 156 hours in any one calendar year. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
17. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown shall be defined as the period of time during which a unit is taken from an operational to non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
18. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown periods. [District Rule 4703] Federally Enforceable Through Title V Permit
19. Source testing to demonstrate compliance with the NO<sub>x</sub>, CO, and NH<sub>3</sub> emission limits of the gas turbine system shall be conducted at least once every twelve months. The 3-run tests shall be performed at four evenly spaced load points in the normal operating range of the gas turbine. [40 CFR 60.335(a), (b)(2) and District Rules 1081 and 4703] Federally Enforceable Through Title V Permit
20. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
21. The owner or operator shall be required to conform to the sampling facilities, test methods and procedures described in District Rule 1081. [District Rule 1081, 3.0 and 6.0] Federally Enforceable Through Title V Permit
22. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. NO<sub>x</sub> emissions (referenced as NO<sub>2</sub>) shall be determined using EPA Method 7E or EPA Method 20. The test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. [District Rules 1081 and 4703, 40 CFR 60.335(b)(1)] Federally Enforceable Through Title V Permit
24. CO emissions shall be determined using EPA Method 10 or EPA Method 10B. [District Rules 1081 and 4703] Federally Enforceable Through Title V Permit
25. Oxygen content of the exhaust gas shall be determined by using EPA Method 3, EPA Method 3A, or EPA Method 20. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
26. Ammonia (NH<sub>3</sub>) emissions shall be determined using BAAQMD Method ST-1B. [District Rules 1081, 2201 and 4102] Federally Enforceable Through Title V Permit
27. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a) and (b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Performance testing shall be witnessed by authorized District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2 and 7.3] Federally Enforceable Through Title V Permit
29. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [District Rule 4703 and 40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
30. If this unit is not fired on PUC-regulated natural gas, the sulfur content of each natural gas fuel source shall be tested weekly to determine compliance with the fuel sulfur content limit. Upon the completion of eight consecutive weekly tests that demonstrate compliance with the fuel sulfur content limit, the sulfur content testing may be conducted on a monthly schedule. If any test shows non-compliance with the fuel sulfur content limit while on a monthly testing schedule, the testing schedule shall return to weekly testing until eight consecutive weeks demonstrate compliance with the fuel sulfur content limit. [District Rule 2201 and 40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
31. If this unit is fired on PUC-regulated natural gas, then the owner or operator shall maintain copies of the natural gas bills on file. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Ammonia shall be injected whenever the selective catalytic reduction system catalyst temperature exceeds the minimum ammonia injection temperature recommended by the manufacturer. [District Rule 2201]
33. Except during startup and shutdown periods, the ammonia injection rate shall be monitored and maintained at a rate adequate to ensure compliance with the NO<sub>x</sub> emission limit of this permit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
34. If the ammonia injection rate is less than the minimum ammonia injection rate, the permittee shall return the ammonia injection rate above the minimum ammonia injection rate established during compliance testing as soon as possible, but no longer than eight hours after detection. If the ammonia injection rate is not returned above the minimum ammonia injection rate established during compliance testing within eight hours, the permittee shall notify the District within the following one hour and conduct a source test within 60 days of the first exceedance to demonstrate compliance with the applicable emission limits at the reduced ammonia injection rate. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. The permittee shall monitor and record the stack concentration of NO<sub>x</sub> (as NO<sub>2</sub>), CO, and O<sub>2</sub> weekly using a portable emissions monitor that meets District specifications. If compliance with the NO<sub>x</sub> and CO emissions is demonstrated for eight consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until eight consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within one day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
36. If the NO<sub>x</sub> and/or CO concentrations, as measured by the permittee with a portable emissions monitor, exceed the permitted emission limits, the permittee shall notify the District and return the NO<sub>x</sub> and CO concentrations to the permitted emission limits as soon as possible but no longer than eight hours after detection. If the permittee's portable emission monitor readings continue to exceed the permitted emissions limits after eight hours, the permittee shall notify the District within the following one hour, and conduct a certified source test within 60 days to demonstrate compliance with the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
37. Compliance with ammonia emission limit shall be demonstrated utilizing one of the following procedures: 1) The permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. 2) The permittee may utilize a District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O<sub>2</sub>. The permittee shall submit a detailed calculation protocol or monitoring plan for District Approval prior to operation of the turbine with the SCR system. 3) The permittee may utilize draeger tubes to measure the ammonia in the exhaust stack. If this option is chosen, the ammonia monitoring using draeger tubes shall be conducted when performing portable emission monitoring for NO<sub>x</sub>, CO, and O<sub>2</sub> emissions. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
38. The owner or operator shall submit a report of NO<sub>x</sub> excess emissions and periods of monitor downtime to the APCO semi-annually, and this report shall be postmarked by the 30th day following the end of each 6-month period. [40 CFR 60.334(j)(5)] Federally Enforceable Through Title V Permit
39. NO<sub>x</sub> excess emissions shall be defined as any unit operating hour for which the average water to fuel injection rate, as measured by the continuous monitoring system, falls below the water to fuel ratio specified in this permit, including during startup and shutdown. NO<sub>x</sub> excess emissions shall also be defined as any 4-hour rolling unit operating hour in which the average ammonia injection rate falls below the minimum ammonia injection rate(s) specified in this permit, not including startup or shutdown. NO<sub>x</sub> monitor downtime shall be defined as any operating hour during which the water to fuel ratio or ammonia injection rate is either not recorded or is invalid. [40 CFR 60.334(j)(1)] Federally Enforceable Through Title V Permit
40. The permittee shall maintain records of the duration of each startup and shutdown, the total combined duration of all startup and shutdowns for each operating day, and the total combined duration of all startup and shutdowns for each calendar year. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
41. Owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used. [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit
42. The owner or operator of the stationary gas turbine and duct burner system shall maintain records of the following: (1) Water to fuel injection continuous monitoring system measurements, (2) Ammonia injection rate monitoring system measurements, and (3) Periodic NO<sub>x</sub>, CO, and O<sub>2</sub> portable emission monitor measurements. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
43. All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
44. The requirements of 40 CFR 72.6 (b) do not apply to this source because only non-Title IV sources can qualify to use the applicable template. A permit shield is granted from this requirement. [District Rules 2520, 13.2 and 4703, 6.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

45. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Rule 407 (San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rules 1081 (as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, and 7.3 and 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit